Castle Neck River is a purely tidal estuary, the water is salt, and the place where this bird was shot was only half a mile from the open sea. At this time of the year no corn could be obtained in the fields, as the farmers all house their corn in this locality, in the fall, and it is a mystery where the bird could have obtained it, as it is the wildest of the ducks that visit this part of the coast.

I have never found in the stomachs of this species anything but fish, shell fish, and marine plants and insects, except in this instance, which I I think is the only one on record. The bird was given to me by Mr. Ceby, and upon dissecting it I found the corn as above stated. If any one can give a like instance among the *sea ducks* I should like to hear of it through the columns of the Naturalist. — J. FRANCIS LEBARON.

ANTHROPOLOGY.

CORDATE ORNAMENT. — A stone object, plowed up in Chester County, Pennsylvania, some twenty years ago, has just been brought to my attention. It is "heart-shaped," made of a coarse, micaceous sandstone, and measures two and a quarter inches from the notch to the apex, two and a half inches across the broadest portion of the lobes, and averages three fourths of an inch in thickness, one lobe being somewhat larger than the other. The edges have evidently been worked and rounded by aboriginal tools, and the notch may have been partially cut at the same time, as the upper portions of the lobes would indicate. This has, however, been deepened artificially by the over-zealous discoverer, with a metal instrument, as may be seen in the sharply cut outlines, which possess a much more recent appearance than the other portions, the grains of sand, in many cases, having been severed and smoothed, The object was, possibly, intended for a rude ornament; or it may have been fashioned for purposes of sepulture. The former supposition seems improbable, as the material is so coarse and crumbles easily, while there is no orifice or projection by which it might have been suspended. The point is somewhat truncated, which has probably been effected by pounding, as it has a ragged, rough appearance.

The two-lobed form is but a conventional device of civilized man to represent the human heart, and it is not at all probable that the North American Indian employed such a figure before he came into contact with the Europeans, especially as he does not use it in his paintings and etchings at the present time, but copies directly from nature. To be sure, the symbol was used in the hieroglyphics or picture-writings of ancient man in the eastern hemisphere, but we have no proof that it occurred in the rude rock-etchings of nomadic tribes in the United States. This form of ornament is so scarce that it can hardly represent a type. I have seen but this one and have heard of but two others, one of which is figured by Dr. Rau in his Archæological Collections of the United States National Museum. The latter was said to have been

found in an Ohio mound, lying on the neck of a skeleton. The three, occurring in widely separated localities and made by different races, must be considered as accidental specimens. No one of them, however, can be certainly considered as a purely aboriginal production, all having been either tampered with or manufactured for purposes of fraud. — E. A. Barber.

Anthropological News. — Number 23 of the publications of the Western Reserve and Northern Ohio Historical Society is a tract of eight pages upon Archæological Frauds, written by Colonel Charles Whittlesey.. A list is given "of all the engraved stones in the United States," nine in number, which have come under the observation of the author. They are the Grave Creek Stone; a quartz axe, sketched by Dr. G. J. Farish for Professor Wilson; a grooved axe or maul, reproduced by Dr. Wilson, on page 412 in his Prehistoric Man; the Holy Stone, of David Wyrick; an epitome of the ten commandments in Hebrew, found by Mr. Wyrick; a stone similar to the Holy Stone, from a mound in Licking County, Ohio; a grooved stone axe, from Butler County, Ohio; a stone alleged to have been plowed up on the eastern shore of Grand Traverse Bay, Mich.; and a stone maul found, in 1875, in an ancient mine pit, near Lake Desor, Lake Superior. The prinicpal part of the tract is devoted to the various copies and versions of the famous Grave Creek Stone. Six drawings are given, the last being a copy used by Monsieur Levy Bing, at the Congress of Americanists, at Nancy, in good faith, as a Canaanitish inscription. Colonel Whittlesey joins with our ablest archæologists in deprecating the credulity which attaches to these palpable frauds.

The Pennsylvania Historical Society have published Heckewelder's Indian Nations, as the twelfth volume of their series. The apology that Mr. Heckewelder had filled his book with "the national traditions and myths of the Indians" can but provoke a smile from those who have sought for days through wearisome pages to hear the story of the red man's faith from his own lips. This reprint of an old book has our unqualified praise for the spirit which conceived it, and the taste and accuracy which characterize its execution.

The Smithsonian Report for 1875 is just issued and contains the following anthropological matter: International Code of Symbols for Charts of Prehistoric Archæology (illustrated), by O. T. Mason; Certain Characteristics pertaining to Ancient Man in Michigan, by Henry Gillman (illustrated); The Stone Age in New Jersey, by C. C. Abbott, M. D. (223 illustrations).

The war in the Turkish provinces has awakened a fresh interest in the ethnological questions involved in this classic land. Perhaps there is no corner of the world where the questions of race, religion, language, and government more overlap and intermingle. To those of our readers who take an interest in these phases of the controversy we recommend the

two articles in the *Geographical Magazine* for October, by Mr. Ravenstein, accompanied by four maps exhibiting the spread of Mohammedanism, the political divisions, the comparative density of population, and the nationalities; and the History of the Mongols from the Ninth to the Nineteenth Century, by Henry H. Howorth. — O. T. Mason.

GEOLOGY AND PALÆONTOLOGY.

The Geological Survey in Charge of Prof. F. V. Hayden. — The productiveness of the work pursued in America by Professor Hayden, the greatness of the results obtained by this savant and the collaborators whom he has associated with him, the hope and expectation of having science enriched by new discoveries of which those of these last times seem but a prelude, — all these considerations have deeply impressed the French savants, who attentively watch the researches of every kind in geography, physics, botany, zoölogy, and especially geology and palæontology, pursued through the unexplored Territories of the United States west of the Mississippi, and towards the Rocky Mountains. It would be impossible to trace out, even in a summary, what is the most striking and interesting part in the undertaking of Professor Hayden, and I must merely mention some essential points which from the speciality of my studies I am prepared to appreciate to their full value. It is certain, first, that the Yellowstone or Geyser region, recently surveyed and preserved by the wisdom of the Federal government against the danger of devastation, put to the disposition of science the exposition of an assemblage of phenomena of the highest interest. Their examination will serve to explain the mode of formation of the lacustrine deposits of Europe, where the geyserian action is so remarkably visible. Henceforth it will be easy to follow the proceedings formerly employed by nature on the European Continent, and which now are in full action in the central part of the American Union. It is also evident to the geologist who considers the general classification of the formations, as it is fixed from the order of the materials as they exist in Europe, that a great revolution is preparing in geology from the discoveries in regard to the stratigraphy of the Territories recently explored under the direction of Dr. Hayden. The Dakota group and the lignitic formation constitute, in fact, two systems of an enormous power, wherein the fresh-water formations of an uncommon thickness are directly superposed on the marine beds, or in alternation with them. Of these two systems the one is incontestably cretaceous, the other as incontestably tertiary, and both, equally rich in fossils, animal and vegetable, are so intimately bound together that the passage from the one to the other is by a series of degrees without interruption or gap.

Now this is indeed a fact of immense importance in this, that it disproves all that was supposed to have been observed positively in Europe in generalizing local and partial phenomena. In the minds of